

**ORIGINAL**

*Before the*  
**FEDERAL COMMUNICATIONS COMMISSION**  
*Washington, D.C. 20554*

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of )  
)  
Amendment of Part 20 and 24 of the )  
Commission's Rules — Broadband )  
PCS Competitive Bidding and the )  
Commercial Mobile Radio Service )  
Spectrum Cap )  
)  
Amendment of the Commission's )  
Cellular PCS Cross-Ownership Rule )  
)

WT Docket No. 96-59

GN Docket No. 90-314

To: The Commission

**Comments of**  
**CELLULAR COMMUNICATIONS OF PUERTO RICO, INC.**

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Cellular Communications of Puerto Rico, Inc. ("CCPR") hereby submits these comments in response to the Commission's Notice of Proposed Rule Making ("NPRM") in the above-captioned Docket.<sup>1</sup> CCPR, through its subsidiaries and affiliates, is the nonwireline cellular licensee in 11 of the 12 MSAs and RSAs in the Commonwealth of Puerto Rico and the two RSAs in the United States Virgin Islands.

<sup>1</sup> FCC 96-119 (released March 20, 1996).

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The United States Court of Appeals for the Sixth Circuit has held that the Commission's 10 MHz limit on the amount of PCS spectrum for which a cellular licensee is available in its cellular service area was the product of arbitrary decision making.<sup>2</sup> Accordingly, the Commission now seeks comments on whether its 10 MHz PCS/cellular cross-ownership limit should be relaxed or retained.<sup>3</sup>

CCPR submits that there can be no support for the 10 MHz limit. Even with only two facilities-based mobile telephony providers in a market, there is no evidence of cellular carriers engaging in anticompetitive behavior or exerting market power through predatory pricing schemes or other practices. From the start of cellular service, notwithstanding the wireline providers' "head start," the Commission's policies regarding the cellular market place have resulted in true price competition. Now with two cellular licensees, enhanced SMR, mobile satellite service, and at least three facilities-based PCS market entrants soon to be in every service area, the competition in mobile telephony promises to be frenzied. Even assuming a cellular licensee is able to win two 10 MHz blocks of PCS spectrum in its cellular service area<sup>4</sup> and build out its system, it could not engage

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<sup>2</sup> Cincinnati Bell Telephone Company v. FCC, 69 F.3d 752, 762 (6th Cir. 1995).

<sup>3</sup> NPRM at ¶ 66.

<sup>4</sup> This is a significant assumption, given the fact that the first three PCS licensees, the other in-market cellular licensee, as well as many of those  
(continued...)

in any anticompetitive behavior or otherwise minimize competition in the mobile wireless telephony market.

Far more important concerns have to do with designing an industry that can provide the type and quality of service that the Commission intended when it created PCS. In addition to competing with cellular and other types of mobile telephony, PCS is intended to compete with landline telephone service. Because the costs of obtaining PCS licenses through competitive bidding and building the infrastructure are so high, consumer prices can be competitive only if the acquisition and construction costs can be divided among a large customer base. If these customers use PCS as a substitute for basic landline telephone service, the average monthly minutes of use per subscriber will be substantially higher than those now found in cellular. The combination of a large customer base and high use will require significant bandwidth to provide adequate service. Given these requirements, 10 MHz is simply not enough bandwidth to provide a PCS service competitive with both mobile and landline telephony, even through the use of digital technology.

The 10 MHz PCS spectrum block is actually two 5 MHz blocks, one for each direction of traffic. In one typical use of Time Division Multiple Access

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<sup>4</sup>(...continued)

entities unsuccessful in the first two broadband PCS auctions will likely compete for the remaining D, E and F Block licenses.

("TDMA") technology with three time slots per channel, 5 MHz yields 166 channels. Twelve of these channels will be required for call set-up, leaving 154 voice channels. A typical PCS microcell station would use 42 channels (14 channels for each of 3 sectors). This produces a frequency reuse factor of 4 (154 divided by 42), which results in a short distance between cells reusing the same frequencies and consequently limited capacity. To control interference, a complex antenna site and power control design would be necessary, but the capacity constraint nevertheless would still render such a system completely insufficient in an urban situation to provide a full panoply of services.

In contrast, the same typical system with 20 MHz of spectrum provides a very different picture. With 10 MHz available in each direction, the allocation would yield 333 channels. Subtracting 21 control channels leaves 312 voice channels. Using a reuse factor of 4, the cellular carrier would have 78 channels per cell, hence a significant increase in capacity. Alternatively, 312 channels would give the cellular carrier the flexibility to utilize a reuse factor of 7 (with 42 channels at each site), which is similar to the existing cellular frequency plan. This would allow not only more capacity and better interference control, but would take advantage of the existing cellular system design. Similar calculations with similar results apply to the use of Code Division Multiple Access ("CDMA") and Global Standard Mobile ("GSM") digital protocols.

As stated above, with more channels available it becomes feasible for cellular carriers to use more of their existing infrastructure to locate their PCS facilities. Not only does this ultimately result in lower prices for subscribers, it also helps alleviate one of the significant new crises of the wireless age: the paucity of suitable antenna sites for a multiplicity of mobile service providers.

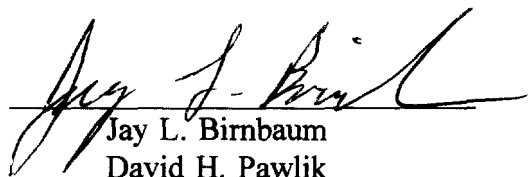
Allowing cellular licensees to hold up to 20 MHz of PCS spectrum with overlapping service areas is also consistent with the Commission's 45 MHz spectrum cap for broadband Commercial Mobile Radio Service ("CMRS"). Indeed, broadband PCS providers can stay within this cap by obtaining as much as 40 MHz of PCS spectrum (and still acquire 5 MHz of SMR spectrum). Regulatory parity requires that other CMRS competitors also be able to accumulate similar amounts of spectrum without having to attain 45 MHz in piecemeal fashion through the acquisition of cellular, PCS, and SMR spectrum (many of which is spread over noncontiguous frequencies or no longer available).

Accordingly, with the advantages to consumers that will flow from economies of scale and the marked absence of any justification for lower limits, the Commission should relax its PCS/cellular cross-ownership rule and find

cellular licensees eligible for up to 20 MHz of PCS spectrum in overlapping service areas.

Respectfully submitted,

CELLULAR COMMUNICATIONS OF PUERTO RICO, INC.

  
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